

REMARKS/ARGUMENTS

The following remarks are believed responsive to the points raised by the Office Action dated September 5, 2008. In view of the following remarks, reconsideration is respectfully requested.

The Pending Claims

Claims 1, 2, 4-11, 14, 16-18, and 32-36 remain pending.

The Office Action

Claims 1, 2, 4-11, 14, 16-18, and 32-36 were rejected under 35 USC 103(a) as being unpatentable over the combination of U.S. Patent No. 6,117,497 to Murahara et al. (hereinafter referred to as "Murahara"), U.S. Patent No. 4,946,903 to Gardella, Jr. et al. (hereinafter referred to as "Gardella"), and U.S. Patent No. 5,158,680 to Kawai et al. (hereinafter referred to as "Kawai"). This rejection is respectfully traversed.

For subject matter defined by a claim to be considered obvious, the Office must demonstrate that the differences between the claimed subject matter and the prior art "are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains." 35 USC 103(a); see also *Graham v. John Deere Co.*, 383 US 1, 148 USPQ 459 (1996). The ultimate determination of whether an invention is or is not obvious is based on certain factual inquiries including: (1) the scope and content of the prior art, (2) the level of ordinary skill in the prior art, (3) the differences between the claimed invention and the prior art, and (4) objective evidence of nonobviousness. *Graham*, 383 US at 17-18, 148 USPQ at 467.

Consideration of the aforementioned *Graham* factors here indicates that the present invention, as defined by the pending claims, is unobvious in view of the cited references.

For purposes of the analysis here, and for the sake of argument, the level of ordinary skill in the art can be considered to be relatively high, such that a person of ordinary skill in the art would have an advanced degree and/or several years of experience in the relevant field.

Regarding the scope and content of the prior art, and the differences between the claimed invention and the prior art, Murahara teaches a “*surface* modification method” (col. 3, lines 9-10, emphasis added) wherein the space between the surface of glass as an entrance window for light such as ultraviolet light and the surface of a workpiece is made very thin (col. 2, lines 57-60; *see also*, Figure 4). This is reinforced by the Examples, frequently referring to the “surface modified” material (e.g., col. 17, line 56 (Example 13); col. 18, line 2 (Example 14); col. 18, line 60 (Example 18); Examples 20-26). Murahara also refers to the contact angle with water in various Examples. However, as is known in the art, the contact angle (θ), which is geometrically defined as the angle on the liquid side of the tangential line drawn through the three phase boundary where a liquid (in this case, water), gas, and the solid intersect, is measured using water droplets and a contact angle goniometer, e.g., via the static or dynamic sessile drop method.

Thus, contact angle relates to a surface characteristic (*see also*, U.S. Patent 5,437,900 to Kuzowsky as referenced on page 5 of the Office Action); it does not indicate the Critical Wetting Surface Tension (CWST) through the thickness and bulk of the material (*see*, the present application, paragraph [0044] referring to CWST as defined in U.S. Patent No. 4,925,572). There is no reference to CWST anywhere in Murahara.

Gardella, like Murahara, teaches surface modification (*see, for example*, col. 3, line 45: “the methods impart surface wettability”), col. 4, lines 54-55: “increased wettability and other surface properties”). Gardella repeatedly emphasizes the modification (which is achieved through radio frequency glow discharge) is only to a depth of between 10 to 100 Angstroms (e.g., col. 4, lines 42 and 54), and thus, the modification is not through the thickness and bulk of the fluoropolymer. There is no reference to CWST anywhere in Gardella.

Kawai emphasizes providing a coated membrane and merely teaches rendering the pores of a porous membrane hydrophilic by depositing various wetting agents on the membrane (col. 7, lines 19-24). There is no mention of CWST, wetting/dewetting ratio, F/C ratio, or O/C ratio.

While the Office Action alleges that the O/C and F/C ratio “could” (page 3) be controlled to the desired values of CWST range, and the degree of substitution of fluorine

atoms on PTFE surfaces “can” (page 4) be controlled to the desired value of surface tension, there is no such suggestion in the cited references, and there is no explanation in the Office Action as to why such modifications, particularly involving such disparate techniques (Murahara involves radiation selected from ultraviolet visible and infrared radiation, and requires a glass window for the radiation and a thin space between the glass and the surface of the material to be modified; Gardella involves radio frequency glow discharge; Kawai involves rendering the pores of a porous membrane hydrophilic by depositing various wetting agents on the membrane), would have been obvious to one of skill in the art. The Office Action also fails to explain how one of skill in the art could combine such disparate techniques.

For purposes of the analysis here, there is no need to consider any objective criteria of nonobviousness.

Considering all of the *Graham* factors together, it is clear that the present invention would not have been obvious to one of ordinary skill in the art at the relevant time in view of the combined disclosures of Murahara, Gardella, and Kawai. Accordingly, the obviousness rejection should be withdrawn.

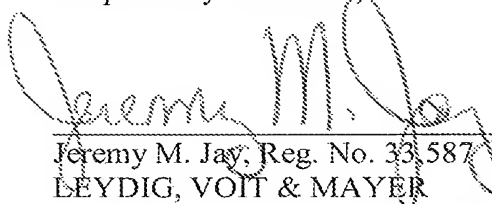
Since the independent claims are allowable for the reasons set forth above, the dependent claims are allowable as they depend from the novel and non-obvious independent claims.

For the reasons set forth above, reconsideration of the rejection is respectfully requested.

Conclusion

If, in the opinion of the Examiner, a telephone conference would expedite the prosecution of the subject application, the Examiner is invited to call the undersigned attorney.

Respectfully submitted,

A handwritten signature in dark ink, appearing to read "Jeremy M. Jay", is written over a horizontal line.

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